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May 7, 1951

RE: CACHING IN ALASKA

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 6/22/94 BY SP12B:TS/SC
342251
Referral/Consult

The following data on caching has been compiled from information obtained through interviews with the personnel of the

[redacted] representatives of the Fish and Wildlife Service of the Territory of Alaska, Department of the Interior; and selected big game guides, trappers and other persons in the Territory of Alaska who have had experience in this field.

This document does not purport to be all-inclusive or to be a standard for caching but rather includes the ideas, suggestions and experience of men who have lived for protracted periods of time in the wilderness of Alaska.

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According to [redacted]

[redacted]

Mr. HOLGER LARSEN, Chief, Fish and Wildlife Service Office, Anchorage, stated that in his opinion a unit of two men provides a great deal more protection from predators and the rigors of winter weather. Two can be much more successful in hunting, building and the dispatching of duties involved in survival. He added that if a survival unit is composed of more than two men, it often results in a majority clique being formed, making life almost unbearable for a minority group when men are forced to live together for long periods of time in isolation. Such a situation quite often results in violence.

As caches are set up files should be compiled on them and minute and detailed records of everything concerning a particular cache should be included in such a file.

Referral/Consult

With reference to the particular problem at hand, it is believed that caches will necessarily have to be established within the proximity of all [redacted]

[redacted]
in certain instances, to be determined, it will be necessary to establish two or more caches in the area of certain of these
[redacted]

The broad and general categories of items to be cached for this program will be food; camp and survival gear; radios and service parts; and gasoline and fuel oil.

The term of time considered in this study with reference to supplies has been arbitrarily chosen to provide for two men for one year without outside aid.

In the opinion of persons contacted with reference to caching, it is being taken as a fact that men cannot survive in the back country of Alaska for protracted periods of time without some shelter other than tents or other temporary shelter. In almost all instances those who do survive in the interior and live there have shelter consisting of a cabin. It is believed that in all instances where caches are established in the proximity of the strategic areas a cabin must be found or must be built. It is believed that in most instances cabins which may be utilized already have been erected.

With reference to the number of caches which must be set up in connection with this program, no specific number can be stated at this time. However, it is reasonable to assume that 12 will be necessary.

With reference to the cost, no estimate can be made, although from a study of this dossier, it is apparent that the cost of each will be considerable in view of the fact that each must be equipped with guns and ammunition, a year's food supply, considerable camp gear, clothing and radio.

It is noted that the terrain in which all of the caches will be established is extremely rugged. Access can be had to the locations of the same by airplane and in some instances by water. In all cases it will be impossible to get into the cabin and cache sites without a bush plane equipped with skis in the winter and pontoons in summer. At the sites of the anticipated locations the weather will be extremely cold in the wintertime, going to 50 degrees below zero. In winter the days are very short and the nights long. In the summer in these same locations the days are very long, the nights short and one of the hardships to be endured is the not inconsiderable plague of mosquitoes.

The problem of caching must be approached with careful preparation and determination and handled by teams who have had some experience in this work.

It has been estimated that a home base camp site for two men for a period of one year should be supplied with more than one cache. Each cache should be an entity in itself, that is, it should contain all items necessary to the survival of the individuals and the operation of this program. In this manner, if one cache is destroyed by fire or an enemy, there will be one or more others upon which to rely.

MANNER OF PACKAGING MATERIAL TO BE CACHED

All materials which are cached for future use must be protected from the elements, from extreme cold, from predators, such as bears, wolverines and wolves, and must be preserved in order that they will be maintained in usable condition as long as possible.

In the opinion of Mr. HOLGER LARSEN, referred to above, the placing of food stuffs and as much other gear as possible in sealed cans will give such items the maximum of protection. This manner of storing items for caching is presently being used in the Territory of Alaska. The type of cans chosen usually are corrugated tin milk cans of 5 or 10 gallon capacity. Items stored in this manner cannot be battered open by predators and will withstand rust and deterioration. Likewise, such cans can be delivered to a location of caching by being parachuted from

a plane or, if the cache is to be located in tundra, may be free dropped without danger of destruction when they are delivered.

All or as many items as possible should be packaged in tin, sealed containers. All items of food, where possible, should be dehydrated or powdered, inasmuch as they will freeze in the wintertime and thaw in the summertime if they contain any liquid. Such freezing and thawing will result in considerable spoilage and in instances contamination of other items placed in the same package if liquids in thawing burst their container and allow the contents to spill over the cache.

In some instances water and moisture proof foil may be used on certain items such as fishing gear, ammunition and other metal objects. If foil is the only protection over such items, they, of course, will necessarily have to be placed in a large metal container with various other items in order that they will be completely protected from the elements and predators.

In a few instances, items may be merely boxed and placed in a cache where such items are not exposed directly to the elements. Such items may consist of rope, axes, hatchets, knives, cooking utensils, etc. In these instances boxes such as this will have to be stored in tight and preferably log caches on stilts.

In a few instances, items may be contained in canvas or burlap. Such items might be susceptible, however, to rust, corrosion and other like phenomena.

In planning a particular cache and choosing the items to be placed in it, the foregoing should be borne in mind to prevent such cached items being worthless when they must be used.

CHOOSING CACHE LOCATION

In the experience of persons who have done considerable caching in the Territory of Alaska, the most common choice of location is one that is partially protected by large trees, rock formations, etc. In connection with this program, there is the added necessity of camouflage. This problem can best be approached by the careful consideration of a location by the person who is ultimately to use the cache and a person who may be qualified as an expert in this field.

Several locations within the radius of a few miles of the home base camp can be chosen and the cache must suitably to that terrain and climate be erected. Each of these caches should contain all items which are necessary for survival and to the operation of this program.

MAPPING AND MARKING CACHES

It is believed that after cache locations have been

chosen, caches built and items to be cached stored therein, a detailed map of this particular camp site and cache location should be made. This map should be supported by specific directions to find such cache. This can be done by reference to certain natural objects as trees, rivers, streams, mountains, etc., in that location. Likewise, the map should show the names of individuals having personal knowledge of the location of the cache in order that such information can be passed on to someone at a later date to enable him to find it without any difficulty whatsoever.

After a cache has been established, in addition to the map referred to above, a detailed dossier should be compiled showing meticulously all items which have been placed in it. Two copies of such dossier should be made in order that one may be placed in the hands of the person who will use such cache and the other can go into the file made up concerning that particular cache.

It is also believed that detailed photographs should be made of all caches, which photos may be valuable later in locating the cache and to determine whether it is sufficiently camouflaged to escape detection.

The location of all caches, after being placed on an elaborate and detailed map, should be spotted on a master map which will be available to persons interested in the administration of this program.

METHODS OF FREIGHTING SUPPLIES TO CACHE LOCATIONS

The only methods available for getting materials and supplies to cache locations in the territory are as follows: Transporting by airplane; transporting part of the way by railroad in certain instances; transporting by water in some instances; and by manually packing such materials in.

Obviously, the most logical of all methods listed above is by flying all materials in by plane and delivering them to the cache locations by parachute or free drop. Hence, this method is the only one concerning which any comment will be made.

The team which has been chosen to set up a particular cache can be on the location ready to receive the items to be cached when they are dropped. This team can chose the cache locations, build the caches, estimate what they need, how it is to be packed and build any shelter at the home base site which is necessary. When the items to be cached are dropped in they can be examined, stored, detailed lists checked and other information mentioned above obtained and caches sealed.

BUILDING OF CACHES

Referral/Consult

It is believed that caches can be built more efficiently and expeditiously by a team consisting of an expert in this field, the agent who will possibly use a particular cache and a member or representative of [] FBI, [] A representative of one of these organizations should have complete knowledge of all caches and should be there to make the complete and permanent record of the cache itself and everything that is in it.

ITEMS TO BE CACHED

(A) Radio parts and equipment

Referral/Consult

- (1) At least one radio of a type to be selected by [] FBI
- (2) Power unit for the radio, it being noted that in almost no instance is there electricity from REA or some municipal plant which would be available. If there were, most of it, of course, would become unavailable in case of an invasion. Hence, all radios must be equipped with power units to operate them.
- (3) Gasoline and oil in ample supply to operate the generator.
- (4) Sufficient spare parts to keep the radio in constant operation.
- (5) Complete set of radio instruction books by which the operators can learn in detail the parts of the radio and make minor repairs.
- (6) At least one complete repair kit to be decided upon by experts of the FBI []

- (7) Complete sets of codes to be used. These will be determined by experts of FBI
- (8) Complete sets of crystals to be decided upon by experts of FBI

As a general statement concerning the radios, they should be small and compact. They should be designed and built with the thought in mind that they must necessarily be operated by one or two men who, though trained in this field, will by no means be experts. They should be as light as possible; as sturdy as possible; and capable of being moved by one or two men. They should not be standardized with all other radios used in this program inasmuch as the detection of two or more in exact duplicate will quite possibly lead to the uncovering of the whole system. With this thought in mind, it is suggested that quite possibly the units can be built into as many brands of well known radio cabinets as possible. The power units likewise should not be all of one kind for the same reason set out above.

(B) Arms and ammunition - per man

- (1) A large caliber hunting rifle, either a 30.06 Winchester, Model 70, with sling; 300 Magnum, with sling; or a 270, with sling.
- (2) A small caliber sidearm should be provided for small game. This can be a .22 caliber Hi-Standard, with holster; a K-22 Smith and Wesson, with holster; or a .22 caliber Woodsman Colt, with holster.
- (3) Ammunition - For the hunting rifle it is believed that 800 rounds of ammunition will suffice and for the pistol it is believed that 1,000 rounds will suffice.
- (4) Small hunting knife and sheath.
- (5) Large marine folding knife.

The above types of weapons are not being given as a standard but as suggestions of the types that are most commonly used and most popular in this country.

(C) Clothing - per man

(1) Summer

Skiivies	12
Shorts	12
Light trousers (wool)	4 pair

Denim trousers	2 pair
Shirts	6
Mosquito netting (head nets and mosquito bars)	2 each
Mosquito repellent	12 bottles
Shoepacks (slipper type)	2 pair
Rubber boots (hip length)	1 pair
Light field boots (composition sole)	1 pair
Socks (light wool)	12 pair
Light wool jacket	3
Caps (any type)	2

(2) Winter

Heavy wool underwear	5 suits
Field shoes (commonly called "Little Abners")	2 pair
Mukluks (canvas), with insoles	2 pair
Camp shoes (leather moccasin type)	1 pair
Socks (knee length wool, heavy)	12 pair
Trousers, Kersey lined	3 pair
Shirts (heavy wool)	6
Field jacket (pile lined and hip length)	2
Parka with hood (canvas, unlined, for trail)	2
Parka (pile lined, overcoat type, with hood attached)	1
Caps (canvas or wool hunting type with ear flaps)	2
Gloves	
Leather mittens with liner (of excellent quality)	6 pair
Wool finger gloves	6 pair
Survival vest, fully equipped	1
Sweaters (wool, with sleeves)	2
Sewing kit, fully equipped	1

(D) Medicines

- (1) First aid kit, fully equipped
- (2) Penicillin in sufficient quantity for emergencies
- (3) Sulfa drugs in sufficient quantity for emergencies
- (4) Red Cross first aid textbook
- (5) Set of surgical instruments

(E) Foods and kitchen items

Dehydrated foods (in sufficient quantity)
C2, C3, C4 rations, cached in water if

possible to prevent freezing and
thawing

Salt in sufficient quantity, sealed			
Pepper	"	"	"
Flour	"	"	"
Sugar	"	"	"
Tea	"	"	"
Coffee	"	"	"
Powdered milk	"	"	"
Powdered eggs	"	"	"
Cod liver pellets	"	"	(2 a day per man - 600)
Butter in tins in sufficient quantity			
Dry potatoes	"	"	"
Dry onions	"	"	"
Dry peaches	"	"	"
Dry prunes	"	"	"
Dry apricots	"	"	"
25 pounds brown sugar			
Cinnamon - 4 ounces			
Cloves - 4 ounces			
Sage - 4 ounces			
Allspice - 4 ounces			
50 pounds shortening			
Canned vegetables in sufficient quantity			
5 pounds corn meal			
5 pounds baking soda			
2 pounds soda			
Soap flakes in sufficient quantity			
Hand soap in sufficient quantity			
Toilet paper in sufficient quantity			
Waxed paper in sufficient quantity			
Napkins in sufficient quantity			

The above is not meant to be all-inclusive - See
attachments Number 1 and 2 as references to this problem.

(F) Camp gear for two men

- (1) Dog team where needed with no less than 7
dogs, with harnesses, traces and sled.
Sufficient equipment for repair and replacement of sled
and harnesses will be needed.
- (2) Where dog team is furnished, 300 dried fish
for each dog per year.
- (3) Snow shoes, trail type 6 pair
- (4) Skis 2 pair

(5)	Pack boards, trapper type	4
(6)	Tents (2 man type, light silk)	2
(7)	Sleeping bags (light, one man)	4
	" " (double type)	2
(8)	Trail axes (light pole type)	2
(9)	Camp axes (double bit, Woodsman type)	2
(10)	Hand saws	2
(11)	Cross cut saws	1
(12)	Camp tool kits, fully equipped	2
(13)	Compact trail fishing kits	4
(14)	Nylon line used commonly for cargo parachutes	300 feet
(15)	Survival kit candles	3 dozen
(16)	Sealed matches in sufficient quantity	
(17)	Nested light camping kits	4 sets
(18)	Blankets, wool	8
(19)	Sheets	8
(20)	Pillow cases	8
(21)	Towels	12
(22)	Washcloths	6
(23)	Dish towels	12
(24)	Small block and tackle unit	
(25)	Snare wire for trapping small game	100 feet
(26)	Steel traps	24
(27)	Light, strong rope	200 feet
(28)	Combination wood and gas range	1
(29)	Wood heater or stove	1
(30)	Floor oil furnace	1

(G) Gear necessary for operation of agent

(1)	Field glasses	
(2)	Camera where necessary	
(3)	Flashlight with sufficient bulbs and batteries	1 each agent
(4)	Signal panels, signal mirrors, signal flags and signal flares	
(5)	Manual of enemy plane photographs	
(6)	Manual of enemy uniform insignia	

(H) Explosives

- (1) Sufficient quantity dynamite fuses and caps for ordinary use in blasting stumps, ice and other similar obstacles.
- (2) Sufficient quantity of black powder to make blast.

- (3) Instruction manuals for the use of dynamite and black powder

(I) Gasoline

- (1) Sufficient quantity for operating the radio power unit and cooking and heating.

It is noted that almost all gasoline taken into the back country of the Territory of Alaska is carried in by airplane and parachuted or free dropped to the earth. The containers are the so-called "jerry cans" which are a rather sturdy 5, 7 or 10 gallon container. Also, the gas can be delivered and cached in the GI gas cans or in any strong drum of more than 10 gallon capacity. It is noted that if the capacity of the drum used is more than 10 gallons the container will split when it strikes the ground and any more weight than that of 10 gallons is exceedingly hard to transport in rough terrain. This is obvious because of the size and shape of gasoline drums.

- (2) Oil of the proper quality and quantity for the operation of the power generators, as well as for any oil cooking unit that may be at a particular camp site.

- (3) Assorted greases for lubrication of equipment

(J) Miscellaneous

There are being attached to this dossier certain material which was submitted in writing at the time this phase of the program was being investigated. These documents have been numbered for ready reference.

Attachment Number 1 is a list of essential items for two men drawn up by [redacted] He owns [redacted] [redacted] which is located approximately [redacted] miles from Anchorage in the mountain range and at a location known as [redacted] He has all of the items referred to in his list, having taken them in piece meal by small plane. As a big game guide he takes clients all over the territory to hunt and fish.

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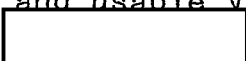
Attachment Number 2 consists of the comments of [redacted] big game guide and bush pilot, who operates out of Anchorage. [redacted] list was shown to him and this attachment consists of his comments concerning it and elaborating upon it.

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Attachment Number 4 is a list of winter clothing
and usable year round fishing gear which was compiled by [redacted]



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Referral/Consult

Attachment Number 1

34225/
6/22/94 SP 1287318

LIST OF ESSENTIALS FOR TWO MEN FOR ONE YEAR

Power

- 1 Kohler 1500 watt AC 60 automatic 24 volt starting
- 1 Hobart 3000 watt AC 60 manual 6 volt starting

Kohler

- 1 auto panel complete
- 1 magneto
- 8 spark plugs
- 1 overhaul kit complete
- 1 carburetor
- 2 12 volt batteries, 1 dry charged

Hobart

- 1 overhaul kit complete
- 1 distributor
- 1 coil
- 8 spark plugs
- 1 carburetor
- 2 6 volt batteries, 1 dry charged

Complete set tools, including the following minimum:

- | | |
|---|---|
| 1 set box end wrenches | 1 assorted machine screws, bolts, nuts |
| 1 set open end wrenches | 1 assorted aircraft screws, bolts, nuts |
| 1 set sockets and wrenches, complete | Assorted cotter keys, washers |
| 1 set pipe wrenches | Pliers, monkey wrenches, side cutters |
| 1 set crescent adjustable wrenches | Assorted copper tubing and fittings |
| 1 set taps and dies | Assorted aircraft type hoses |
| 1 set pipe threaders | Solder and acid |
| 1 set flaring tools | Assorted safety wire |
| Cross cut saw, rip saw, key hole saw, soldering iron, electric and plain, 2 plumber's fire pots | 1 set carpenter tools |

Aircraft

- 1 single engine airplane, skis, wheels, floats and fittings for all
- 1 factory top overhaul kit for engine used or 1 spare engine
- 1 extra each magneto, carburetor, starter, hydraulic pump, flap valve
- 1 extra each propeller, skis, tire, tube wheel
- 1 float repair kit including rivets and gun, metal, canvas, adhesive
- 1 spare interchangeable float or set floats
- Fabric, dope, thinner, pinking shears, pigmented dope, thread, fabric needle, metal of same type as ship (if metal, brushes
- 2 spare batteries to fit, dry charged
- 1 spare radio complement to fit

Gasoline and oil supply will depend upon hours expected to operate but minimum is as follows, all 80/87 aviation:

- Power plants, 3000 gallons, 50 gallons #10 oil, 50 gallons #20 oil
- Aircraft, 2000 gallons or 10 gallons per hour for up to 150 hp engines, estimated 200 hours operation, add proportionately 500 gallons #20 aviation oil, 50 gallons #30 aviation oil
- 5 cases 2/5s white gas for fire pots, gas lanterns, etc.
- 2000 gallons fuel oil for heat (wood in emergency)
- 6 drums butane gas for cooking (wood in emergency, should be avoided on account of smoke)
- If crawler type tractor to be used (and is recommended), an estimated 1,000 gallons same type aviation gas advisable

Ground Movement

- 1 Crawler type tractor, small, such as D2 cat or Cletrac
- 1 complete overhaul kit for same
- 1 magneto, starter, distributor, generator, power winch, cable, electric system, spark plugs, bulbs, lights, etc.
- 1 bulldozer blade, 1 sled, 1 power takeoff
- 1 dog team, minimum 7 dogs, with harnesses, traces, sled
- 1 each spare sled, set harnesses, traces, assorted snaps, rings, rivets, etc., for repair, 14 dog chains
- 2000 dried salmon, bundled, or 300 fish for each dog
- 6 pair trail type snow shoes
- 4 trapper type pack boards
- 4 walkie talkie type radios, synchronized with home frequency
- 4 light silk tents, 2 man type
- 2 light 1 man sleeping bags, trail type
- 2 light double width sleeping bags, trail type (essential where wilderness movement requires back packing for more than one)
- 6 light 3/4 trail axes, pole
- 2 double bit axes, 2 saws, 1 cross cut saw
- Rifles, ammunition, flares, recognition
- Compact trail fishing kits
- 4 sets nested light camping kits
- 2 trail first aid kits

Home base equipment, outside

- Complete set weather instruments, codes, cloud index, etc.
- Complete set outside tools, shovels, axes, saws, sledges, wedges, etc.
- 1 wind sock

Home base equipment, inside

Complete repair kit for radio receivers, transmitters, instruction books, manuals, etc.
Complete set spare tubes, including 2 transmitting tubes for each transmitter
Complete set crystals used
1 combination wood and gas range
1 wood heater
1 floor furnace, oil
6 spare blankets, sheets, pillow cases (assuming base already furnished)
12 towels, washcloths, dish towels

Personal Equipment

12 sets shirts and shorts
6 sets heavy underwear
6 heavy shirts
6 sweat shirts
2 heavy caps
4 pair mitts and liners
12 pair heavy socks
2 pair shoepacks, 14"
2 pair camp shoes
12 bottles insect repellent
12 insect bombs, small type
12 insect bombs
12 pair light socks
12 pair jersey type gloves

Complete set personal equipment, such as razor, blades, tooth brushes, tooth paste, combs, shampoo, hair tonic, etc. - personal cleanliness is very important.

All clothing and supplies assumed to be extras, with normal amount accompanying each man.

2 pair hip boots, light

Food List

5 cases 48 tall milk or 100 pounds dry milk
120 pounds butter in tins
60 dozen eggs treated or 12 pounds dry eggs
50 pounds sliced canned bacon
50 pounds canned meats
50 pounds canned sausage, breakfast type and wieners
200 pounds potatoes or 50 pounds dry potatoes
5 pounds dry onions
25 pounds mixed dry vegetables
25 pounds dry prunes
25 pounds dry peaches
25 pounds dry apricots
100 pounds sugar
25 pounds brown sugar
25 pounds salt
1 pound pepper
4 oz cinnamon, 2 oz each sage, cloves, allspice

1 pint maple flavor
50 pounds shortening
2 cases 24/2 each, corn, peas, beans, pork and beans,
tomatoes, mixed vegetables
1 case each asparagus, carrots, beets, spinach, sweet potatoes,
kidney beans
2 cases each 24/2½ halves peaches, pears, apricots, pineapple
1 case 24/2½ fruits for salad
2 bales 12/4 pound pancake flour
100 pounds flour
50 pounds corn meal
5 pounds baking powder
2 pounds soda
1 case 24/2 pound assorted jam
1 case assorted soup
50 pounds soap flakes
24 bars hand soap
24 rolls toilet paper
4 rolls waxed paper
6 packages napkins
6 cans scouring powder
1 case bottle catsup
3 cases 24/1 pound coffee
10 pounds spaghetti
1 case canned chili
1 case canned stew
1 case 12s canned chicken
1 case 12 quarts pickles
1 first aid kit, complete
1 set surgical instruments
Complete unit spare bandages, etc.

Attachment Number 2

CACHING OF SUPPLIES AND EQUIPMENT

The list furnished by [] was made available to [] big game guide, without his knowing the source of same and after examination he stated that he was in agreement with the list set forth with the following observations:

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Aircraft

He stated his opinion that the Piper Cub was a superior aircraft for consideration under this program as far as single engine planes went. He stated he recommended wing covers for the plane as well as a padded engine cover, pointing out that in an emergency a sleeping bag could be used for this purpose. He also recommended a fire pot and a can into which the oil from the plane could be drained and kept warm.

Regarding overhauling kits, he advised that the top overhauling kit included only rings and a gasket and therefore he recommended the factory major overhaul kit, stating that this included bearings as well as the rings and gasket which could be easily replaced. He further suggested a spare set of valves, together with suction cup, valve grinder and grinding compound.

He advised that besides an extra propeller there should be included extra landing gear, stating that normally if a ski or float is damaged, the landing gear itself is wiped out or damaged. In this connection [] stated he did not believe that floats were interchangeable unless the new Edo float could be used in that manner and that therefore if any spare was to be included it should be a set of floats rather than one. He stated from a practical standpoint it was usually possible to repair any normal damage to floats and as concerning the float repair kit advised that the rivets and gun were not necessary and recommended the following for float repair:

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- 1 box $\frac{1}{2}$ #7 sheet metal screws
- 2 square feet of $\frac{1}{2}$ hard 030 aluminum or 17 SD sheet aluminum together with light canvas and zinc chromite paste

He stated that the metal should be available in a 1' square together with 3 and 6 square inch pieces. He added that a small hand drill and a set of drills up to $\frac{1}{4}$ " should be included for float repair and advised that with these materials he had made repairs to floats which held and remained dry for 2 or 3 years after such patching.

He recommended a spare antenna for the airplane radios, stating that these frequently were lost or damaged in bush operations.

In connection with aviation oil, he advised it was his experience that 15 gallons would be required for each 100 hours of either winter or summer operation and he recommended #20 oil for winter operation and #40 for summer operation but stated that probably #30 oil could be used for either winter or summer operation.

Ground Movement

Concerning ground movement he stated that if such equipment were to be needed he would recommend a weasel for year round operation. He stated he could visualize the utility of such equipment only if it were for the moving of heavy supplies and equipment and that movement of personnel would be faster in the long run by foot. As for any use of the weasel or tractor it would be necessary to cut trails in many instances.

Regarding tents, he advised against the small silk mountain tents because of their tendency to sweat and recommended a good waterproof canvas tent, 8 x 10, and suggested a gray color.

He stated he could recommend only down sleeping bags, suggesting the double bag with both the inner and outer sections, stating that the outer section was good for summer use.

[] recommended against the double bit axe, suggesting rather that something in the nature of a Collins 3/4 axe was the best camp axe and the best for utility as it could be used to cut and also as a hammer. In this connection he pointed out also that no hatchets should be considered in the list of equipment. b6 b7C

Personal Equipment

[] recommended that all pants, shirts and coats be of wool material, stating that the pants should be full length with no cuffs, allowing them to drape over the shoepacks, and stated that the woolen pants were the quietest for movement in the brush. He also stated that Kersey lined pants were not desirable where one wore long woolen underwear. b6 b7C

Foods

He stated that dried milk should always be included as well as some canned milk and that butter in tin cans was an excellent idea. He pointed out that the average trapper takes 2 each of 5 pound cans of dried potatoes, stating they were an excellent staple and he believed one pound of dried potatoes was equal to approximately 7 pounds of fresh potatoes. He also recommended raisins and apricots with some prunes and suggested inclusion of bay leaves for the making of stews.

Miscellaneous

[] suggested a small Coleman lantern as well as the Coleman GI stove and stated that the average trapper for a winter supplied himself with 10 gallons of Blazo for the lantern. It is noted that in an emergency the Coleman GI stove can be used as a fire pot for warming airplane engines.

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He advised that a good hunting knife should be included as well as snare wire in the survival kit. He also recommended several good tarps which might be used in an emergency as a small tent and possibly caching as noted below.

[] questioned whether there had been any development in the possibility of filtering smoke from wood stoves and suggested that the individuals might char their wood first, stating that this could be possible on days when it was snowing or overcast and windy, which charred wood could then be utilized on clear days or when there was little wind with the least danger of any smoke being visible.

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b7C

He advised that any caches above the ground would have to be built bear proof and any food supplies be sealed to prevent their odor from attracting bears and other predators.

[] advised he has had some experience in free dropping of supplies and equipment from a small plane and cited as an example times when individual bottles of whiskey were dropped into tundra with little or no breakage. It is noted that tundra is the best for free dropping, even better than snow, because of its sponginess which allows it to give and spring back.

b6
b7C

Gasoline Caching

[] stated that it would be possible to cache gas and oil by merely staking them under some cover in the brush, covering same with tarps and placing moss on top of the tarps, which from anything but a very short distance would appear to be a moss-covered mound of earth.

b6
b7C

He stated he had never had any experience in caching gasoline with the idea of concealing same and that in the past in connection with his guiding business and flying he had merely placed cans out in the open beside some lake or stream. He stated that if commercial cans were used he would recommend removing them from the wooden cases which would absorb moisture and pointed out that he has been best satisfied by his own use of a 7 gallon Army gas can which is square in shape and may be easily transported by plane. He advised in this connection that he has had these cans stashed out for as long as a 3 year period with little or no loss

from leakage and rust and that to date none of these cans have ever been bothered by bears. He stated in this connection he did not know whether it was the shape or the heavier metal than is used in a commercial can which produced these results.

He pointed out that the 15 gallon drum was a good item if you had good transportation facilities, stating that one of these drums could be set up in the back seat of a Cub plane and hooked into the fuel line easily within 15 minutes which would then provide the plane with 10 hours of cruising time. He pointed out, however, that normally the 7 gallon container would be all that the average man would want to handle by himself in refueling any small plane when he had to lift it up to the wing tanks and particularly if the plane were on floats in the water.

Mr. JACK JEFFORD, old-time bush pilot and presently Chief Pilot for Civil Aeronautics Administration, advised that while he had never had any experience in attempting to conceal caches of gasoline he had found that in using the commercial cans which come in 2 5 gallon cans in a wooden case it was better to remove the wooden cases as they absorb moisture unless the cans were to be stored along the coast line where salt water spray might get to them, in which event it might be better to leave them in the wooden cases.

Mr. JEFFORD stated he was not certain but believed that the 10th Air Rescue Group of the Air Force had utilized a small 10 gallon drum on occasion but stated that a 5 or 7 gallon container would be better when it was to be handled by one individual because of the weight involved.

Mr. JEFFORD stated on one occasion CAA had cached some gasoline in commercial cans in the wooden cases and upon inspection during the second year they had found approximately a 25% loss due mainly to rust and some shrinkage.

Mr. JEFFORD pointed out that a good rule of thumb for the amount of gas needed would be 10 gallons per hour in any engines of a horsepower from 150 to 185. He also recommended the Piper Cub plane for performance and noted the gas consumption would be less than 10 gallons an hour.

Mr. JEFFORD also pointed out that in his experience he had never suffered any loss from theft along the coast in the vicinity of Nome and north from there but that there had been some pilferage of their gas supplies by the natives along the Kuskokwim River and vicinity.

Mr. MARTIN S. JORGENSEN, Manager, Marketing Department, Standard Oil Company of California, long-time resident of Alaska,

recommended that the commercial cans, if used, be stacked, if possible, to protect the bottoms of the cans, stating that most of the commercial cans today have ridges on the bottoms which have a tendency to bulge and that moisture collects along these ridges, resulting in rust. He suggested that improvement might be obtained by having the ridges eliminated or inverted if a special can were to be considered for use.

He pointed out that the problems most frequently incurred from his experience were that of extreme cold which caused the collapsing of the cans and also salt water which was inducive to rust action. He suggested that if cans could be obtained with better tin plating than normally available commercially, it would cut down on losses from rust. He also suggested that any container used for the storage of gas should be galvanized or made of tin which would also have better lasting qualities. He stated that commercially, as far as he knew without going into the field of special containers, gas and oil were available only in 5 gallon cans which came in cases of 2. He stated that he believed the Air Force in the past had 15 gallon drums which were of heavier gauge metal but pointed out that gasoline would average $6\frac{1}{4}$ pounds per gallon and that a smaller container could be more readily handled by an individual.

Attachment Number 4

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 6/22/94 BY SP12 BTJ/SC
342251

WINTER:

- 3 suits long underwear, 100% white virgin wool
- 12 pair socks - light weight $\frac{1}{2}$ wool
- 12 pair socks - heavy wool, fleece lined preferred
- 6 pair white felt insoles
- 1 pair deck slippers
- 1 pair shoepacks
- 1 pair canvas mukluks
- 2 pair felt liners for mukluks
- 1 pair hip length rubber boots, light weight, not ankle fit
- 2 pair leather mitts
- 4 pair wool liners
- 24 pair jersey gloves
- 3 pair pants, 100% wool, full length, cuffless, forestry cloth preferred
- 4 wool shirts, 2 medium weight, 2 heavy weight
- 1 Filson coat, hip length
- 1 canvas parka with hood
- 1 pair down pants
- 1 down filled coat with hood - NOT STRIP FEATHERS
- 1 ski cap with ear flaps
- 1 ski cap without ear flaps
- 3 pair Rayban sun glasses
- 1 leather belt
- 1 dozen hankies
- 6 T-shirts
- 6 pair shorts
- 2 cotton gabardine shirts
- 2 pair cotton gabardine pants, forest green color
- 1 pair coveralls

USABLE YEAR ROUND FISHING KIT:

- 1 glass casting rod
- 1 casting reel
- 2 spools of fish line
- 1 fly line
- 50 yards 10 pound test leader
- 6 each snelled hooks, sizes 4, 6, 8, 10
- 12 flies, size 8, 3 each of Black Nat, Royal Coachman, Grey Hackel and Brown Hackel
- 12 flies, size 10, same as above
- 1 box lead shot, number 0 Buck
- 6 small swivels
- 4 Red and White striped daredevils, 2 medium, 2 small
- 1 fire plug
- 1 redheaded river runt
- 4 small Colorado spinners

4 jars salmon eggs - single
2 jars salmon eggs - clusters
2 large treble hooks or snagging hooks
1 small trout gill net, 1 3/4 mesh, 10" square
1 fishing pliers